

# czarna panika

- Gravity **26.6 BLG**
- ABV **12.6 %**
- IBU **93**
- SRM **39**
- Style **Russian Imperial Stout**

## Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **22 liter(s)**
- Boil time **80 min**
- Evaporation rate **10 %/h**
- Boil size **27.2 liter(s)**

## Mash information

- Mash efficiency **85 %**
- Liquor-to-grist ratio **2.6 liter(s) / kg**
- Mash size **27.4 liter(s)**
- Total mash volume **38 liter(s)**

## Steps

- Temp **68 C**, Time **90 min**
- Temp **78 C**, Time **0 min**

## Mash step by step

- Heat up **27.4 liter(s)** of strike water to **77.2C**
- Add grains
- Keep mash **90 min** at **68C**
- Keep mash **0 min** at **78C**
- Sparge using **10.4 liter(s)** of **76C** water or to achieve **27.2 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	7 kg (66.4%)	80 %	5
Grain	Jęczmień palony	0.5 kg (4.7%)	55 %	985
Grain	Simpsons - Crystal Dark	0.35 kg (3.3%)	74 %	158
Grain	Słód Caramunich Typ II Weyermann	0.4 kg (3.8%)	73 %	120
Grain	Słód owsiany Fawcett	0.5 kg (4.7%)	61 %	5
Grain	Płatki owsiane	0.4 kg (3.8%)	85 %	3
Grain	Pszeniczny	1 kg (9.5%)	85 %	4
Grain	Fawcett - Pale Chocolate	0.4 kg (3.8%)	71 %	600

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Columbus/Tomahawk/Zeus	100 g	60 min	15.5 %

## Yeasts

Name	Type	Form	Amount	Laboratory
Wyeast - British Ale	Ale	Slant	400 ml	Wyeast Labs